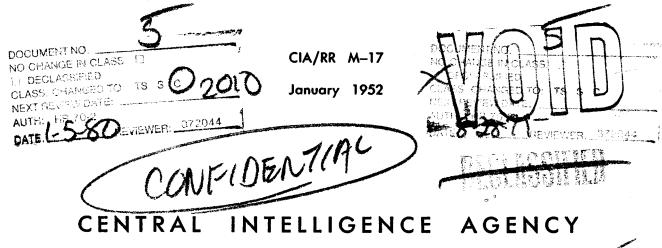
SECRET
SECURITY INFORMATION

FOR THE ASSISTANT DIRECTOR FOR RESEARCH AND REPORTS

THE BOUNDARY BETWEEN TURKEY AND THE USSR





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THE BOUNDARY BETWEEN TURKEY AND THE USSR

CIA/RR M-17

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CENTRAL INTELLIGENCE AGENCY

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SECURITY INFORMATION

I. INTRODUCTION

The international boundaries of the Soviet Union are to be covered in a series of reports, of which this is the second. The first, <u>U.S.S.R.-Iran Boundary</u>, was published as M-15. Reports on the Soviet boundaries with other countries will be issued from time to time. The purpose of the series is to present information on the following: (1) the documentary history of the present boundary, (2) the course of the boundary, (3) peoples and economy of the border area, (4) boundary disputes or potential disputes, and (5) important maps of the boundary area.

The present boundary between the USSR and Turkey was defined by treaty in 1921. In part, it is identical with an older boundary existing between 1829 and 1878. As demarcated on the ground in 1925 and 1926, the boundary follows an irregular course for about 367 miles across the highland area east of the Black Sea. From west to east it traverses three distinct terrain regions: (1) a rugged and complex mountain region, (2) a high, dissected plateau, and (3) the valley of the Aras River. In the northwestern section, where it crosses the mountain and plateau regions, the boundary is located with reference to small streams, watershed lines, mountain heights, towns, and roads. In the southeastern part it follows the thalweg¹ of the Aras River.

^{1.} The thalweg of a stream is the channel, and in determining a boundary following the thalweg, the line of deepest points in the channel is most commonly used.

The principal routes crossing the boundary focus on Erzurum on the Turkish side and Tiflis (Tbilisi) on the Soviet side. The only transborder railroad is a broad-gauge line from Sarıkamışl in Turkey to Leninakan in the Armenian SSR. These two points are connected with the Turkish and the Soviet rail networks, respectively. Important roads cross the boundary from the Turkish side to the Soviet side between Kars and Leninakan, Ardahan and Akhalkalaki, Ardahan and Akhaltsikhe, Batumi and Hopa, and Iğdır and Yerevan.

Economic development is more advanced on the Soviet side of the boundary than on the Turkish side. The Transcaucasus region of the Soviet Union is of considerable importance to the over-all Soviet economy, whereas northeastern Turkey occupies a minor position in the Turkish national economy. Near the Black Sea the principal agricultural products are tea, fruits, corn, nuts, and tobacco; in the Aras Valley, wheat, cotton, and citrus fruits are grown on irrigated land. Mining is developed to only a small extent in the area near the boundary, although there are considerable deposits of copper in Turkey and minor copper deposits on the Soviet side. The principal industrial centers, all of which are on the Soviet side, are Batumi, Leninakan, and Yerevan. Batumi is an important center of petroleum refining and transshipment.

^{1.} In accord with the policy of the Board on Geographic Names, the "i's" in some Turkish place names are printed without a dot. The "i" without a dot represents a Turkish vowel for which there is no English equivalent.

The boundary traverses an area of linguistic and religious complexity. The two principal ethnic groups on the Soviet side are the Georgians and Armenians, each of which is represented in the Soviet Union by an SSR. The Armenians not only are found in the Armenian SSR but also are widely scattered in urban centers on both sides of the boundary. Other peoples of importance in the boundary area are the Kurds, Adzhars, and Lazes.

There appear to be no disputes between the two countries regarding the location of the present boundary. Since 1945, however, the Soviet Union has, on different occasions, advanced claims to large areas of Turkish territory on the ground that they have been historically connected with Georgia and Armenia and should therefore be attached to those republics. A dispute of lesser importance concerns the proposed joint use of waters of the Aras River diverted by the Serdarabad dam to supply irrigation canals.

Good source materials for representing the boundary are available in Washington. These include the official map series at the scale of 1:25,000 and the protocol that describes the boundary in detail, both of which were prepared by a mixed Turkish-Soviet demarcation commission in 1925 and 1926. Map CIA 11737, U.S.S.R.-Turkey Frontier Area, which accompanies this report, was compiled from these two sources, from various other Russian and Soviet sources, and from Turkish map series. Map CIA 11806, Turkey-U.S.S.R. Frontier

Area: Historical Boundaries and Soviet Claims, also attached, shows the three international boundaries that have existed between Turkey and Russia and indicates the greatest extent of Soviet claims on the areas of present-day Turkey. A third map, <u>U.S.S.R. Border Area</u>: Turkey and Iran--Transportation, CIA 11692, also is included.

II. TREATIES AND AGREEMENTS DEFINING THE TURKEY-USSR BOUNDARY

The present Turkish-USSR boundary is the result of a series of treaties and agreements completed during the nineteenth century and the first quarter of the twentieth century. Russia first acquired territory in the present frontier area in 1802 by annexing Georgia as a province. The second Russian acquisition of importance in the border area came as a result of the Russo-Persian War of 1826-27. By the Treaty of Tourkmantchai, signed at the conclusion of the war, Persia ceded to Russia the khanates of Yerevan and Nakhichevan. The western boundaries of these areas form a part of the present international boundary. (The various boundary lines discussed in this section are shown on map CIA 11806.)

At the close of the Russo-Turkish War in 1829, Russia again extended its territory in the boundary area by acquiring part of the Armenian Plateau lying to the north of the Aras River. According to Article IV of the Treaty of Adrianople, signed in 1829,² the frontier between the two empires was established as follows:

...the line which, following the present boundary of the Province of Gouriel /Guria/, from the Black Sea, ascends to that of Imeritia, and thence in the most direct line to the point where the frontiers of the Pashalics of Akhaltzik

^{1. &}quot;Treaty of Peace and Friendship between Russia and Persia signed at Tourkmantchai 10/22 February 1828," British and Foreign State Papers, 1827-28, Vol. XV, London, 1829, pp. 669-675.

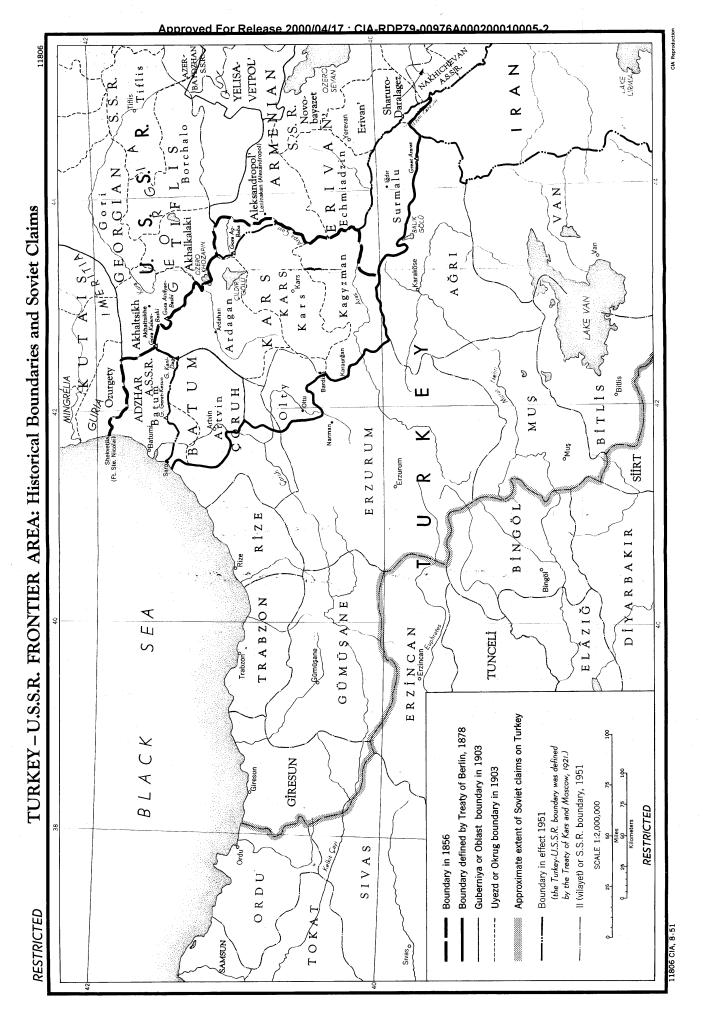
2. "Treaty of Peace between Russia and Turkey signed at Adrianople, 14th September, 1829," Edward Hertslet, Map of Europe by Treaty, Vol. II, London, 1875, pp. 813-823.

Akhaltsikh, Akhaltsikhe and of Kars unite with those of Georgia, leaving, in this manner, to the north and within this line the city of Akhaltzik and the fort of Alkhalkhaliki Akhalkalaki, at a distance which must not be less than two hours.

The territories south and west of this line towards Kars and Trabzon, together with the greater part of the territory of Akhaltsikhe, were to remain under Turkish sovereignty. Those territories to the north and east, toward Georgia, Imeritia, and Guria, as well as the whole of the coast of the Black Sea from the mouth of the Kouban Kuban as far as St. Nicholas Shekvetila, were to go to Russia. Russian claims to Georgia, Imeritia, Mingrelia, and Guria also were recognized.

The boundary described in the Treaty of Adrianople remained in effect for almost 50 years despite Russian conquests inside the Turkish border during the Crimean War. The Treaty of Paris in 1856, signed after the Crimean conflict, provided that each of the two nations should retain its prewar possessions in Asia and that a mixed commission should be appointed to verify the boundary. In 1878, however, Russia extended its territory by further conquest in Turkey, and by Article LVIII of the Treaty of Berlin¹ the territories of Ardagan Ardahan, Kars, and Batum Batum Batumi were ceded to Russia,

^{1. &}quot;Treaty between Great Britain, Austria-Hungary, France, Germany, Italy, Russia, and Turkey, for the Settlement of Affairs in the East, signed at Berlin, 13 July 1878," British and Foreign State Papers, 1877-1878, Vol. LXIX, London, 1885, pp. 749-766.



as well as all the other territory that lay between the former Russo-Turkish frontier and the new line. By Article LIX the Emperor of Russia declared his intention to constitute Batumi a free port. The boundary fixed according to the Treaty of Berlin remained in effect until the end of World War I.

During World War I the border area between Turkey and Russia became an important battleground for the fourth time within a century, and Russia again advanced into Turkish territory. By the spring of 1916 the Russians had occupied the important cities of Erzurum and Trabzon. By that time, Russia also held the larger part of Turkish Armenia, including territory extending more than 100 miles across the northeastern part of Ottoman territory. The Russian revolution brought an end to the conflict, and on 3 March 1918 Russia signed the Treaty of Brest-Litovsk, by which territories that had been under Russian control since 1878 were surrendered to Turkey. Turkish possession of the areas acquired by the treaty was challenged, first by the Transcaucasia Union (set up after the Russians withdrew from Georgia, Armenia, and Azerbaydzhan) and later by the Armenian Republic. Two years after the signing of the Treaty of Brest-Litovsk, Turkey recognized the Armenian Republic and, by Article 89 of the Treaty of Sèvres, signed August 10, 1920, agreed

^{1.} Traité de Paix entre Les Puissances Alliées et Associées et La Turquie signé Le 10 Août 1920 à Sèvres (text in French, English, and Italian).

to submit to the arbitration of the President of the United States the determination of a common boundary in the vilayets (provinces) of Erzurum, Trabzon, Van, and Bitlis. The line suggested by President Wilson neven became a boundary, and the Treaty of Sévres never went into effect, because Turkey and Russia attacked Armenia in September 1920.

As a result of the war that followed, Armenia ceased to exist as a nation. By the terms of the peace treaty signed at Alexandropol (Leninakan) on 2 December 1920, Armenia surrendered Kars Oblast, Artvin \(\subseteq \text{Coruh} \subseteq \text{Okrug}, \text{ and Surmalu Uyezd in Yerevan Gubernia to Turkey. At the same time, Georgia ceded Batum Okrug to Turkey. Under the terms of an agreement signed on the same day between Russia and Armenia the remainder of Armenia was absorbed into the Soviet Union.

The frontier between Russia and Turkey continued to be the subject of negotiations between the two nations until 16 March 1921, when they signed the Treaty of Moscow. The present boundary, a section of which follows the boundary established in 1829, was described in Article I of that treaty. By Article II of the treaty, Turkey ceded Batum back to Georgia.

^{1. &}quot;Treaty of Friendship between Russia and Turkey signed at Moscow 16 March 1921," British and Foreign State Papers, 1923, Part II, Vol. CXVIII, 1926, pp. 990-996.

On 13 October 1921 the Turkish Government signed a treaty at

Kars with the Soviet republics of the Caucasus -- Armenia, Georgia,

and Azerbaydzhan. The boundary specified by the Treaty of Moscow

was repeated in Article IV of the Treaty of Kars, which stated:

IV. The northeast frontier of Turkey (after the map of the Russian general staff, on a scale of 1:210,000, 5 versts to the inch) is determined by the line which, beginning at the village of Sarp on the Black Sea, passes by Mt. Khedis Mga Hedis Dağı the dividing line of the mountain waters of Shavshet-Mt. Khrebet Shavshetskiy Kana Dagh Gora Kani-Dag; from there, it always follows the former northern administrative frontiers of the sanjaks of Ardahan and Kars, the thalweg of Arpa Chai Arpa Çayı and that of Araxe Aras as far as the mouth of the Nijni Kara Su Tujni Karasou.

A mixed commission of delimitation, composed of an equal number of members, with the participation of a representative of R.S.F.S.R., is directed to determine in detail and to establish the actual frontier of the state, and to erect boundary markers. 1

Article VI of the Treaty of Kars repeats the statement made in Article II of the Treaty of Moscow regarding the cession of Batum to Georgia.

The next in the series of treaties regarding the frontier made during the early 1920's was the Treaty of Angora between Turkey and the Ukraine, which was completed on 2 January 1922. By this treaty the Government of Ukraine agreed to recognize the frontier of Turkey that had been established by the preceding treaties.

^{1. &}quot;Treaty of Friendship, 13 October 1921," Soviet Treaty Series, Vol. I, 1917-1928, Washington, D.C., 1950, pp. 136-137.

^{2. &}quot;Treaty of Friendship and Fraternity between Turkey and the Ukraine signed at Angora, 2 January 1922," British and Foreign State Papers, 1924, Part II, Vol. CXX, 1927, pp. 953-957.

The mixed commission of delimitation, called for by the treaties completed in 1921, began preliminary negotiations on 27 December 1924 and started work on the ground on 14 March 1925. The demarcation work on the present international boundary was completed on 18 July 1926, and the protocol that defines the boundary in detail was signed 9 September 1926. Annex 2 of the protocol is a 49-sheet map of the boundary zone at the scale of 1:25,000, prepared from the survey of 1925-26.

25X1A

^{2.} Described in detail under Map Coverage of the Boundary Area, p. 47.

III. DESCRIPTIONS OF THE BOUNDARY AREA AND THE BOUNDARY

A. Terrain Regions of the Boundary Area.

The Turkey-USSR boundary follows an irregular southeasterly course for 366.9 miles from the southeastern tip of the Black Sea into the interior of the high Armenian Plateau. (See map CIA 11737.) Most of the area traversed by the boundary is characterized by high and rugged terrain. In this section the Transcaucasian high-lands and the eastern Turkish highlands converge and form the northern part of the "Armenian Knot" area, which culminates in Mount Ararat just to the west of the southeastern part of the boundary.

Although for most of its length the boundary follows the river courses or the watershed lines along the heights, it passes through three distinct terrain regions -- (1) the Mountain Region, (2) the Plateau Region, and (3) the Aras Valley Region.

1. Mountain Region.

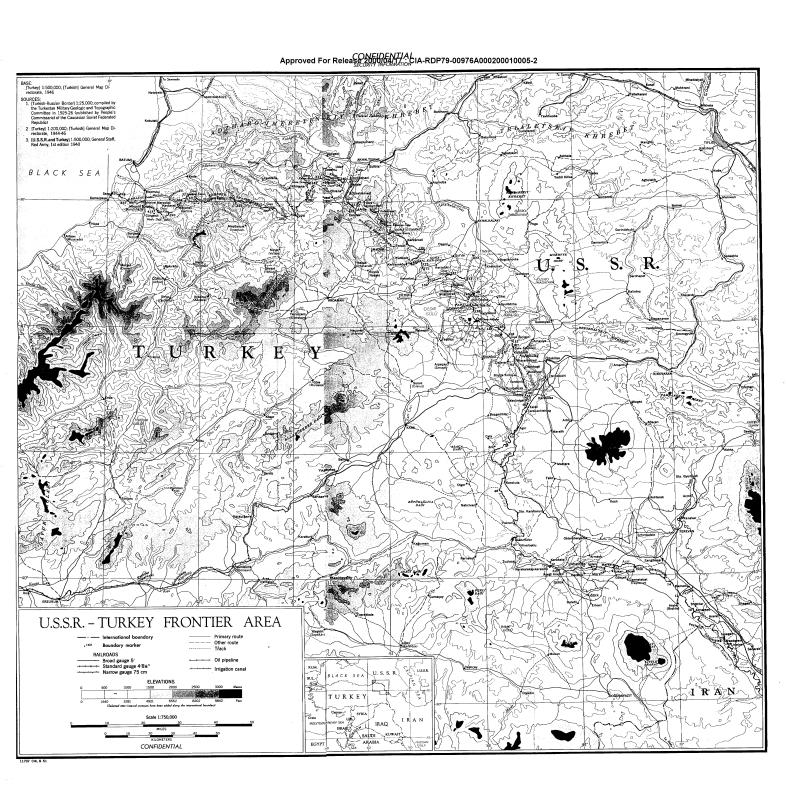
From the village of Sarp on the coast of the Black Sea to the vicinity of the Turkish town of Arile, south of Akhaltsikhe, the boundary crosses an area dominated by mountains with elevations ranging from 7,000 to 9,000 feet above sea level. The mountains in

^{1.} Most of the material in this section is from the following sources: U.S.S.R.--The Caucasus Area, Joint Army-Navy Intelligence Study (JANIS) 41, Chapter II, "Military Geography," 1949;

this area are a combination of the westward extensions of the Minor Caucasus Mountains of the USSR (including Khrebet Shavshetskiy and Adzharo-Imeretinskiy Khrebet) and the northeastward extensions of the Pontic Ranges (including the Karçalsilsilesi and Yalnız-çamsilsilesi Mountains), which rim the Black Sea coast of Turkey. At its western end on the Black Sea the boundary approaches the northern limit of this mountain region. The city of Batumi, about 10 miles from the boundary on the Soviet side, actually is located in a southern extension of the Rion Lowland. The main east-west road and railroad of the Transcaucasus and also the double pipeline from Baku to Batumi follow this lowland.

Elevations in the inland part of the region average over 5,000 feet. The boundary follows ranges that average 7,000 to 9,000 feet and reach a maximum height of 9,210 feet in the Khrebet Shavshetskiy. In the eastern part of the region, west and south of Akhaltsikhe, the elevations drop to between 3,000 and 5,000 feet. Only in the west are there any lowlands. A narrow strip along the Black Sea coast and a small area near the mouth of the Coruh River have elevations little above sea level. Abrupt slopes lead to the higher land of the interior.

The dominating characteristics of the region as a whole are its complexity, rugged relief, and relative inaccessibility. The two main breaks in the east-west mountain barrier by which the boundary may be approached and crossed lie along the Coruh and the Poskof



Çayı, which is a tributary of the Kura River that empties into the Caspian Sea. The two most important routes across the boundary in this region follow the valleys of these rivers.

The streams of the Mountain Region, as of the Plateau Region also, characteristically have deeply cut, gorgelike valleys. Some of the larger streams have terraced banks. In the mountainous sections, particularly, the streams have steep gradients and high velocities, and, although many are short, they carry large volumes of water and much sediment.

The mountains have a significant effect on the climate of the border area as a whole. They act as a barrier to the rain-bearing and ameliorating winds from the Black Sea and thus are a major cause of the dry, continental type of climate of the interior regions to the south and east. The mountains themselves receive large amounts of rainfall, especially on the slopes facing the Black Sea, where from 80 to 100 inches or more fall annually. The rainfall decreases to 24 to 32 inches annually toward the interior of the Mountain Region.

Temperatures vary with elevations and with exposure to the ameliorating winds of the Black Sea. Near the coast the July mean is 68° to 72°F., and the January mean is 36° to 44°F. In the eastern and southern sections of the Mountain Region the July mean is 64° to 68°F., and the January mean is 24° to 32°F.

The most outstanding climatic feature of the region is the subtropical character of the temperatures and the high rainfall along the intermediate slopes of the Black Sea coast and in the open valleys of the Çoruh and its tributary, the Adzharis-Tskali. From the human point of view an undesirable element in the climate of the Black Sea coastal area is the humidity, which averages over 70 percent from May to October. Such high and prolonged humidity makes the summer heat almost unbearable and also creates conditions conducive to malarial diseases.

As a result of the high rainfall and the terrain conditions, the Mountain Region is one of the most luxuriantly forested areas of the USSR and Turkey. The variations in elevation and exposure favor a great variety of vegetative types.

On the sea coast and in the open valleys of the Çoruh River and the tributaries that join it near its mouth a brushwood or maquis type of vegetation is found up to about 1,500 feet above sea level. The mountain slopes between 1,500 and 7,000 feet especially the windward, or western and northern, slopes, have mixed forests, with conifers displacing deciduous trees in the higher elevations. On slopes with elevations above 7,000 or 7,500 feet and on many of the enclosed plateaus, only a subalpine to alpine vegetation can withstand the low temperatures.

2. Plateau Region.

From the vicinity of the town of Arile to a point just east of the confluence of the Arpa Çayı with the Aras River the boundary crosses the high, dissected Armenian Plateau. The level to undulating surface of this lava plateau is interrupted by chains of volcanic mountains 7,000 to 10,000 feet high and by isolated peaks. Consequently, the area is actually composed of several plateaus, those near the boundary having elevations between 4,000 and 6,000 feet. Dominating the landscape in the southern portion of the border area are the peaks of Gora Aragats, 13,428 feet, and Mount Ararat, 17,051 feet.

The plateau areas vary in extent and in many places are strewn with rocky debris. Sharp, steep edges of lava flows and the deep gorgelike valleys of the rivers that drain the area are serious hindrances to travel. The main difference between the rivers in the Plateau Region and those in the Mountain Region is that the former have a more erratic flow.

A notable feature of the terrain of the Plateau Region is the continuation of the northeast to southwest trend of the ranges on the Turkish side of the boundary. On the Soviet side the trend changes to a north-south orientation north of Leninakan (Samsarskiy Khrebet and Mokryye Gory). East of Leninakan a northwest to southeast trend prevails (Bezobdal'skiy Khrebet and Pambakskiy Khrebet). These ranges have a great effect on the main transportation

routes. Again, the principal routes through the area and across the boundary follow the lines of least resistance provided by the river valleys. These are the Ardahan-Çıldır (Zurzuna) - Akhalkalaki route and the Kars-Leninakan route.

The climate of the Plateau Region is dry and continental as compared with that of the mountains. Rainfall averages between 16 and 24 inches annually throughout most of the region but may amount to as much as 24 to 32 inches on some of the higher volcanic chains in the north.

Generally the winters are very cold (-32° F. has been recorded at Kars), and the summers are hot (the mean summer temperature at Kars probably is 70°-80° F.). Diurnal temperature variations are great, and local variations in both temperature and rainfall are also great as a result of the wide range in altitudes and the highly dissected character of the area.

The natural vegetation of the Plateau Region is much less varied than that of the Mountain Region, mainly because of the lower rainfall. The extremes of temperature also contribute to the sparseness of vegetation and the general dull brown color of the landscape. There are scattered forests only at the higher elevations on the ranges that dissect the plateau in the north. The highlands to the

^{1.} Temperature figures based on long records are scarce. Extremes recorded in the area are -40° and $/100^{\circ}$ F. The maximum temperature probably occurred farther south than Kars.

south are barren and exposed. The main vegetative cover of the plateaus is of the steppe to the semidesert type, with grasses and low thorny bushes predominating.

3. Aras Valley Region.

Just east of the confluence of the Arpa Çayı with the Aras River, where the Aras drops abruptly from the Armenian Plateau, the third distinct area traversed by the boundary begins. The boundary follows the Aras to the point where it is joined by the "Nijni Karasou." At the confluence of these streams the USSR, Turkey, and Iran meet, and the Soviet-Turkish boundary ends.

The Aras Valley Region possesses several distinct characteristics that contrast sharply with those of the remainder of the Turkey-USSR border area. The entire region lies between 2,300 and 3,200 feet, the elevations gradually decreasing to the southeast. The level to gently rolling terrain of the relatively wide valley (maximum width 15 miles near Yerevan) offers no serious obstacles to travel. Especially on the left-bank or Soviet side of the boundary, however, drainage conditions may prove to be a hindrance to movement. Most of the streams joining the Aras in this region are left-bank tributaries, and some of the most poorly drained areas are found in the plain west of Yerevan. The difficulties of movement and of road construction undoubtedly are the reasons for the location of the main Soviet border route in the area at some distance from the river, away from the lower courses of the tributary streams, the marshes and swamps, and the irrigation canals.

This section of the Aras is very different from the streams draining the Mountain and Plateau Regions to the north. The river is a typical meandering stream, with low banks, sandy bed, shifting bars, and many cut-offs and large islands. This complex pattern is especially notable between the towns of Kiti and Mursitali in the northern part of the region. The river here is too shallow for navigation and is not crossed by bridges or ferries, but it is relatively easy to ford except during the spring floods.

The semidesert type of vegetation that dominates most of the region consists of salt steppes, marshes, and brushwood, with steppe grasses on some of the higher slopes. The vegetation is a good indication of the main climatic factor of the region -- low rainfall, amounting to less than 16 inches annually. Only through irrigation can any cultivated crops be raised. As in other interior areas along the border, the winters are harsh and the summers hot. The spring thaws occur earlier at the lower elevations in the Aras Valley than in most of the surrounding uplands and plateaus. Warm foehn winds that blow down from the surrounding plateau on an average of 6 to 8 days in March thaw out the ground and make it muddy.

B. Detailed Description of the Boundary.

From the village of Sarp on the Black Sea coast to its northern-most point in the Hirhat Dağı (range) the boundary follows the crests or watersheds of Karaşalvar Dağı, Hedis Dağı, Mezudna Dağı, Khrebet Shavshetskiy, and Hirhat Dağı. Beyond marker No. 278 at the summit

- 18 -

of Gora Kani-dag the line follows the course of the old Ardahan district boundary. (See map CIA 11806.) Within the limitations of the scale of 1:750,000, map CIA 11737 shows minor sectors of the boundary that follow the thalwegs of streams or the lines of minor watersheds to the main heights. The detail shown is well-illustrated by the sectors of the boundary that follow the Coruh River near the town of Maradit (Muratlı) and the Oglaura-su (right-bank tributary of the Coruh south of Maradit) and by the location of the point at which the boundary crosses the Machakhvlis-Tskali, just west of the town of Maçahel (Camili).

From the northern Hirhat Dağı to the point where it reaches the Poskof Çayı (stream) just northeast of the Turkish town of Badela the boundary follows an irregular easterly course located in relation to (1) local physical features, such as Gora Grmani (Tlil Dağı) and the streams Chanchaksu-su and Kirma Deresi, tributaries of the Poskof Çayı, and (2) positions such as towns, road junctions, and trigonometric points. The relationship to these physical and cultural features is indirect in many cases. Although the several straight-line sectors of the boundary in this area have their limits and courses determined by distances from and directions in relation to these features, the features do not, in all cases, lie directly on the boundary.

From the point where it meets the Poskof Çayı the boundary takes a southerly direction following the thalweg of the river to its point

of junction with the Caksuyu (a right-bank tributary). The boundary then follows the thalweg of the Caksuyu in a southeasterly direction to a point northwest of Arile and southwest of Gora Airilyan-Bashi.

Following the watershed line, the boundary then takes a northnortheasterly direction to the summit of Gora Airilyan-Bashi, at
which point it veers abruptly to the southeast and follows the crest
of Harman Tepe Dağları. The boundary then drops to the Karzameti
River and via its thalweg runs in a southeasterly direction until it
meets the Kura River, which it follows to the southwest as far as
the town of Kerteneköy, on the Turkish side of the line. Leaving
the Kura River, the boundary proceeds northeast by east via the watershed leading up to the height of Gora Ker-Ogly to marker No. 177,
about 2 1/2 miles west of the summit. From this point the boundary
turns to the southeast and bisects in a straight line the lake bearing the Russian name of Ozero Khozapin (see map CIA 11737) and the
Turkish name of Hazapin Gölü, leaving the three islands in the lake
to Turkey.

South of the lake the boundary takes an easterly course along the watershed line of the heights associated with Gora Gek-dag (Turkish, Cők Dağı). Just to the east of Gora Gek-dag the boundary turns south and follows the divide to the summit of Gora Taya-Kal (Papa Dağı). Southeast of Gora Taya-Kal, at marker No. 138, the boundary leaves the old Ardahan district boundary and runs south and southeast along the watershed lines and crest of the Akbaba Dağı

leading to and from the summit at marker No. 134 (Gora Akbaba). From the easternmost extent of Akbaba Dağı the boundary proceeds in a southeasterly and southerly direction to a point northwest of Leninakan, where the boundary meets the headwaters of the Dzhamushbu Chay, an upper tributary of the Arpa Çayı, via its right-bank tributary, the Karahan Çayı. In this last section are several straight-line sectors whose limits and directions are related primarily to minor watersheds and specific river crossings. From northwest to southeast the rivers crossed by the boundary are the Karahan Çayı, the Möküz Çayı, and the Badzhogli Chay.

From the headwaters of the Dzhamushbu Chay to the southernmost point of the Turkey-USSR boundary, where the "Nijni Karasou" stream flows into the Aras, the tributaries of the Aras River and the Aras itself determine the course of the boundary line. Following the thalweg of the Dzhamushbu Chay south, the boundary meets the Karahan Çayı and follows its thalweg for a short distance in a southeasterly direction to the point where it flows into the Arpa Çayı, southwest of Leninakan and just south of the Kars-Leninakan road and railroad. Then, taking a predominantly southern course, the boundary follows the thalweg of the Arpa Çayı through a gorgelike valley to its confluence with the Aras.

The Aras leaves the plateau rather abruptly just to the east of this confluence. Beyond this point the Aras follows a meandering and relatively sluggish course, with much stream braiding and many

islands. The boundary follows the midstream line ("milieu") of the river where possible -- that is, where islands cause no difficulty in determining the main channel. It may be assumed that at the time of the demarcation attempts were made to determine the main channel of the river and to allocate the islands and braided sections of the stream on this basis. A stream of the character of the Aras has a tendency, however, to change its main channel and carve new islands. The Joint Demarcation Commission in 1926 provided for such occurrences by a note appended to the protocol allocating any new islands formed by the river to the country from whose banks they were carved. The islands in the Aras portion of the boundary were specifically defined in the demarcation protocol and were shown on the maps.

Markers were placed on many of the islands as well as on the banks of the river.

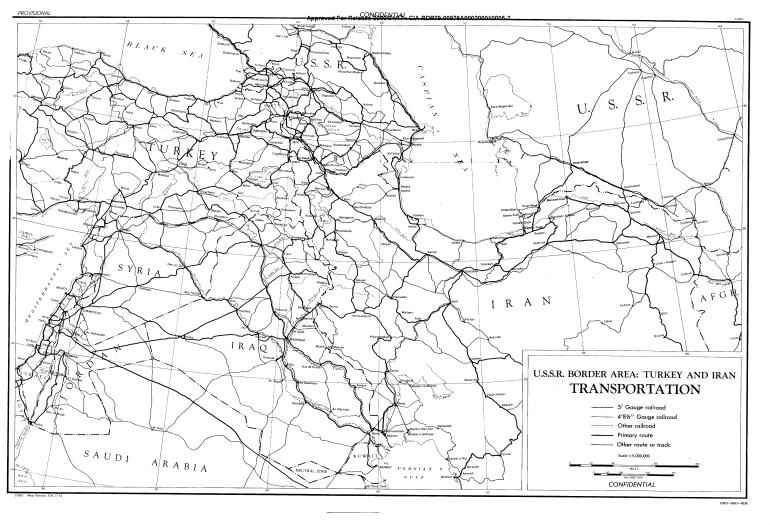
C. Transportation.

Transportation in the Turkey-USSR border area is centered on two cities -- Erzurum on the Turkish side of the boundary and Tiflis (Tbilisi) on the Soviet side. (See maps CIA 11692 and 11737.) The one railroad that connects the border area with the rest of Turkey, as well as the main east-west road leading to eastern Turkey, enters Erzurum from the west. Another important approach to Erzurum and to the eastern part of Turkey is from the

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^{1.} The basic sources for the information in this section are JANIS 41, Chapter VII, "Transportation and Telecommunications,"



northwest by way of the northern section of the Turkish-Iranian trunk road from the Black Sea port of Trabzon.

The importance of Tiflis as the Soviet focal point for land transportation into the border area is based chiefly on its position on the main east-west Rion Lowland road and railroad, which connect Baku on the Caspian Sea with ports on the Black Sea and with the industrial centers and main transportation net of the USSR to the north. Tiflis is also located at the southern end of the Georgian Military Highway, which runs north to Dzaudzhikau (Ordzhonikidze) and is the only main road across the Caucasus Mountains kept open all year.

Because of the rugged terrain, the transportation routes are circuitous and problems of construction and maintenance are many and great. Regardless of the condition of the roads, in certain seasons of the year they cannot be used. The roads are commonly blocked by snow in the winter, often for as long as 3 months at a time. During these periods the railroads are the only means of transportation in much of the area.

The only Turkish railroad in the border area, which runs from Erzurum through Sarıkamış and across the boundary to Leninakan, was originally built by the Russians as a strategic frontier route before this area became Turkish territory. The section from Leninakan westward to Sarıkamış was built as a spur of the broad-gauge

^{1.} This latter approach to Erzurum was of particular significance to eastern Turkey before the railroad to Erzurum from the west was completed.

Tiflis-Tabriz line. The spur is also broad-gauge and extends about 76 miles into Turkish territory. From Sarıkamış to Erzurum the Russians laid a narrow-gauge military line which was completed in 1916. The Turks are in the process of converting this narrow-gauge portion of the Erzurum-boundary rail line to normal or standard gauge, which will make it an extension of the standard-gauge line that connects Erzurum with the Turkish rail network to the west.

The conversion to standard gauge has been completed from Erzurum to Pasinler (Hasankale). The roadbed for the section from Pasinler to Pasinisülfâ (Horasan) was finished in 1950, and the line was expected to be in operation by the end of that year. As yet, no information has been received, however, to indicate that the standard-gauge line is in operation beyond Pasinler. The conversion of the Pasinisülfâ-Sarıkamış section is awaiting an increase in the budget, which may be possible after 1952.

It would be desirable for the Turks, from both strategic and economic points of view, to complete the conversion to standard-gauge of the entire line from Erzurum to the boundary. In the event of hostilities between Turkey and the Soviet Union, the 76-mile extension of the Russian broad-gauge track into Turkish territory would be an immense strategic advantage to the USSR. This line is directed

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toward the main defenses of eastern Turkey centered on Erzurum, only 108 rail-miles from the westernmost point of the broad-gauge line.

The development of a railway net is much further advanced on the Soviet side of the boundary than in either Turkey or Iran. The lines were originally constructed to transport oil from Baku to Batumi and other Black Sea ports, but strategic considerations as well as economic development obviously have influenced the extension of the rail net in recent years.

The most important line directly affecting the border area is the one that runs southwest from Tiflis through Kirovakan to Leninakan and then to the south and southeast, roughly paralleling the Turkish-Soviet frontier and continuing along most of the Iranian-Soviet frontier eastward to the Caspian Sea. This frontier line was completed during World War II and is important in the economic development of the Armenian SSR. As indicated above, a broad-gauge spur of this line crosses the boundary west of Leninakan and extends to Sarıkamış in Turkey. Rail travel across the boundary near Leninakan is believed to be limited to a few trains a week for the exchange of mail and for the use of diplomatic representatives. One report indicated that train crossings of the Dzhamushbu Chay (the boundary stream) were marked by elaborate border-guard ceremonies. 1

The two main Turkish roads into the boundary area are (1) the

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Erzurum-Sarıkamış-Kars route, which has the same general alignment as the railroad and also crosses the boundary just southwest of Leninakan, and (2) the Erzurum-Oltu-Ardahan-Çıldır (Zurzuna) route, which crosses the boundary just north of Ozero Khozapin and runs to Akhalkalaki on the Soviet side of the boundary. Both these routes connect with the main Soviet road, which runs along the entire boundary (Batumi-Akhaltsikhe-Akhalkalaki-Leninakan-Yerevan-Nakhichevan and on to Julfā). All roads and tracks crossing the boundary are linked by means of this Soviet border route with the network of roads and railroads in the Transcaucasus.

The only Turkish road comparable to the Soviet border route is one that runs from Hopa through Çoruh (Artvin), Ardahan, Çıldır, Kars, Kağızman, and Iğdır to Aralık (Başköy), beyond which a track serves the Turkish side of the boundary. The stretch of the road between Çoruh and Ardahan, though classed as fairly good, is in grave need of repair in many places, and reports indicate that it is used very little. East of Iğdır, and in fact along the remainder of the Aras River on the Turkish side of the boundary, the road is very poor, but the level terrain of the area makes good roads less essential here than in the rugged country farther north.

The Transcaucasus region of the USSR, adjacent to both Turkey and Iran, is the only part of the Caucasus area that has a road pattern approaching a network. This road network probably is better developed than that of any other area with comparable terrain in the USSR.

On the Soviet side there are several approaches to the boundary from Tiflis, but the most direct route is to Leninakan via Kalinino. Recent information on the condition of roads in the area is lacking, so that the most desirable route is not known. The importance of the resources and the strategic aspects of the Transcaucasus make it very probable that many of the roads have been improved and that new routes have been constructed. In the rugged part of the area, road construction is difficult and maintenance is an almost constant problem, but the widespread availability of repair materials is an aid to maintenance.

The importance of most of the remaining primary routes across the boundary is determined by local strategic and economic factors. The Black Sea coastal roads, however, are important strategic routes from more than a local point of view. Coast roads on both sides of the boundary are extremely difficult to construct and maintain because of the steep rocky terrain and poor drainage. Nevertheless, coastal roads are of considerable significance because of the important port of Batumi on the Soviet side and because of the copper mines near Murgul (Damar) and the export port of Hopa on the Turkish side. The route from Ardahan north to Akhaltsikhe in the USSR is important because the latter town, besides being a local road center, is not far from a recent extension of the rail line from Borzhomi to

Vale, southwest of Akhaltsikhe. The sector of the rail line from Akhaltsikhe to Vale is not shown on map CIA 11737, because the alignment is unknown. The two primary route crossings in the part of the border area centered on Iğdır and Yerevan gain importance from the agricultural and industrial activities in the Yerevan area and from the potential Turkish development of the area around Iğdır. The strategic value of these crossings will be enhanced with the completion of the rail line northeast of Yerevan to the Baku-Batumi line. 2

D. Agriculture, Mining, and Industries of the Boundary Area.

Economic activities and the development of resources are in a much more advanced stage on the Soviet side of the border than on the Turkish, largely because of better Soviet transportation facilities, especially railroads. Under present conditions, therefore, the Soviet boundary area is more important to the Soviet Union than the Turkish part is to Turkey, and in the event of hostilities the Soviet Union consequently has more at stake from an economic point of view. According to Soviet plans, the Transcaucasus is scheduled to become a semiautonomous economic region by 1952, an indication that further development is to be expected.

^{1. &}quot;Extension of USSR Railroad to Vale, Near the Turkish Frontier,"

Map Research Bulletin No. 23, March 1951, pp. 10-11; Schematic Plan,

Railroads of the U.S.S.R., Primary Passenger Lines, Map CIA 9091;

from map supplement to "Spisok Stantsiy Zheleznodorozhnoy Seti SSSR"

(List of Stations of the Railroad Network of the U.S.S.R.), SSSR

Ministerstvo Putey Soobshcheniya (U.S.S.R. Ministry of Railroad Transportation), Moscow, 1949.

^{2.} The exact status of this line is unknown, but it may be assumed that, in view of the extensive plans for hydroelectric development on the Zanga River from Yerevan to Ozero Sevan, the line is complete at least as far as Sevan.

The Turks also are taking steps to develop their portion of the boundary area, and the Turkish Government is backing mineral explorations and agricultural expansion throughout the country. More specifically, the Turks have recognized the fact that improvement of the transportation system in northeastern Turkey is essential if the resources and economy of the boundary area are to be developed.

1. Agriculture.

The two outstanding agricultural areas of the boundary region are (1) the coast of the Black Sea and the open valleys of the Çoruh and its tributaries, where tea, fruits, grapes, corn, nuts, and tobacco can be grown, and (2) the Aras Valley, where wheat, cotton, citrus and other fruits, and rice can be produced with the aid of irrigation. Other agricultural areas, most of which are on the plateaus in the central sector of the border area, are devoted mainly to the raising of grain and livestock. Through the construction of a dam on the Arpa Çayı north of Leninakan and of the Shirakskiy system of canals in the vicinity of that city, the Soviets have also attempted to produce sugar beets and industrial crops in this interior plateau region.

The Transcaucasus has a position of considerable significance in the Soviet agricultural picture, since it has areas capable of producing tea and citrus fruits, notably the Black Sea coastal areas

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^{2.} Much of the basic information for this section is from JANIS 41. Chapter I, "Brief,"

of the Georgian SSR. Most of the tea produced in the USSR comes from the Adzhar ASSR, where production centers on Batumi and the valley of the Adzharis-Tskali. The latter also is noted for its tobacco production. In the Aras Valley west of Yerevan, cotton is produced, along with wheat and horticultural products.

The Turks are trying to produce as much as possible of their domestic requirements of tea. Rize is the present center of tea production, but an area of 1,500 square kilometers extending eastward to the Soviet border is included in the plans for expansion.1

Further development of the agricultural potential of the Aras Valley by the Turks depends on two major advances -- (1) improvement of transportation facilities, both to carry nonprocessed products and to facilitate the construction of processing plants, and (2) extension of the irrigation system. The first problem is under consideration by the Turkish Government as a part of an over-all plan to improve transportation in northeastern Turkey. Extension of the irrigation system presents a more complicated problem, being fraught with political as well as physical problems (see Boundary Problems, pp. 41-45).

At present the Hanakohendeği Canal, which is about 12 miles long, is the only main irrigation canal on the Turkish side of the Aras River. It receives its water supply from the Aras above the

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Serdarabad dam or barrage, which crosses the river west of Kiti. The irrigation waters from the canal make Iğdır the present center of agricultural activities on the Turkish side of the Aras. Though the amount of cotton grown is not significant at present, this area could become a fairly important cotton-producing region if irrigation facilities were extended. Millet, rice, and some fruits could also be grown here.

2. Mining and Industries.

No outstanding mineral deposits thus far are under exploitation on either side of the boundary. On the Turkish side the copper mines located at the town of Murgul (Damar), about 40 kilometers from the boundary, will be of considerable importance to Turkey when they begin producing. The proposed production of 12,000 metric tons of blister copper a year² will almost double the current Turkish output of this semiprocessed ore.³ The construction of flotation and smelting facilities, begun in 1938, were completed during the fall of 1950, and operations started in late 1950 or early 1951. Labor shortages, difficult access to the mines by a single road, and the closing of the port of Hopa during the winter months will seriously affect the cost of production and the maintenance of production goals.

^{1.} The dam is located about a quarter of a mile upstream from marker No. 32 (see map CIA 11737).

Exploration activities and some production of manganese ore in the easternmost vilayets on the Black Sea coast may be indicators of further manganese exploitation in the future.

Industrial activity of any consequence is confined almost entirely to the Soviet side of the boundary, where the primary centers are Batumi, Leninakan, and Yerevan. All of these cities produce machinery and transport equipment and have food-processing plants.2 Batumi, the western terminus of the Baku-Batumi pipeline, also is an important center for petroleum refining and exporting. The pre-World War II annual intake of crude oil was 21.4 million barrels, which placed Batumi third among the five main refineries of the Caucasus area: (Baku, with 101.1 million barrels, and Groznyy, with 45.2 million barrels, ranked first and second, respectively). The present crude oil intake of Batumi is about the same as it was before the War. The rank of Batumi among Soviet refining centers, however, has been lowered as a result of the decreased importance of the Caucasus production in relation to the total Soviet production of petroleum. In 1940 the Caucasus fields supplied 86.5 percent of the total Soviet production of petroleum, whereas in 1950 it supplied only 55.2 percent. The actual production of the Caucasus dropped from 26.9 million metric tons in 1940 to 20.7 million metric tons in 1950.

Three power plants also are located in the Batumi area, two steam plants in the city itself and one hydroelectric plant to the

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^{2.} JANIS 41, Chapter VIII, "Cities and Towns," pp. 21-22, 28.

southeast on the Adzharis-Tskali River. The hydroelectric plant is the largest, with an installed capacity of 17,000 kilowatts. All of the three power plants are connected to the Gruzenergo (Gruzinskoye rayonnoye upravleniye energeticheskogo khozyaystva -- Georgian Regional Electric Power Administration).

Yerevan, an important metallurgical and chemical center, is benefitting increasingly from the development of a series of eight hydroelectric plants on the Sevan-Zanga cascade, north and east of the city. Six of the eight plants on the Zanga River are in operation as part of the Armenergo (Armyanskoye rayonnoye upravleniye energeticheskogo khozyaystva -- Armenian Regional Electric Power Administration), and three of these are in Yerevan itself. The largest and second-largest plants of the Armenergo, at Gyumush (Sta. Gyumush on map CIA 11737) and Kanaker, respectively, are north of Yerevan. The plant at Gyumush has an installed capacity of 144,000 kilowatts and a planned capacity of 214,000 kilowatts. The plant at Kanaker has an installed capacity of 88,000 kilowatts (100,000 kilowatts planned).

The main users of the electric power in Yerevan and the surrounding area are the Mikoyan copper smelting and rolling plant, the
largest carbide plant in the USSR, the Kanaker (Kanas) aluminum
plant, and the Kirov (Sopren) synthetic rubber plant. Original plans
for the Armenergo indicate an increase in industrial activities in

^{1.} JANIS 41, Chapter IX, "Resources and Trade," pp. 52, 58, 66, Fig. IX-41.

the Armenian SSR, particularly in Yerevan. The latest estimates on the operating plants of the Armenergo indicate a total installed capacity of about 337,000 kilowatts. Plans call for completion of the system in 1955, but it is probable that the planned capacity of almost 600,000 kilowatts will not be reached before 1960.

South of Leninakan are a copper foundry and an iron foundry, in addition to chemical and sericultural activities in the city. A hydroelectric plant of the Armenergo is also located at Leninakan, on the Arpa Çayı. It has an installed capacity of 5,200 kilowatts (also reported as 13,000 kilowatts).²

E. Peoples of the Boundary Area.

The Turkey-USSR boundary area is noted for the ethnic and religious complexity of its population, the result of numerous migrations and military campaigns in and across the area and of the continued isolation of some of the indigenous peoples in areas of rugged terrain. The ethnic groups that have been of the greatest historic importance in the area because of their numbers and their strong nationalistic attitudes are the Georgians and Armenians.³

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Central Intelligence Group, <u>Turkey</u>, SR-1, Appendix F, "Soviet Territorial Demands on Turkey," / 1947/.

JANIS 41, Chapter X, "People and Government." <u>Turkey</u>, B.R. 507, Vol. I.

^{1.} JANIS 41, Chapter IX, "Resources and Trade," pp. 53-54, 58-59, 67-68, Fig. IX-41.

^{2.} JANIS 41, Chapter IX, "Resources and Trade," pp. 54, 67, Fig. IX-41.

^{3.} Most of the information in this section is taken from the following sources unless otherwise indicated:

These two groups, along with the Kurds, represent the most likely threats to the territorial stability of eastern Turkey. The Kurds in Turkey actually constitute a majority of the population in areas not far from the Turkish-Soviet boundary. Soviet claims to eastern Turkish territories on behalf of the Georgian and Armenian SSR's as late as 1945-46 and the Kurdish nationalist movement of recent years are indicative of the present importance of these ethnic groups as possible means of influencing the stability and the territorial limits of eastern Turkey.

Language and religion are the most outstanding and binding characteristics of the various groups of peoples in the area. The Georgians speak the Georgian language and belong to the Greek Orthodox Church. The Armenians have a language and church of their own. The Kurds follow the Sunni creed of the Mohammedan religion as do the Osmanli Turks who are in the majority in the Turkish portion of the immediate boundary area. The Osmanli Turks, however, speak the Osmanli dialect of the Turkic language, whereas the Kurds speak a language closely related to Iranian.

In the Soviet portion of the border area the over-all majority of the people are Armenians and Georgians, as is evidenced by the creation of an SSR for each group. For outlines of administrative areas mentioned in this section, see map CIA 11806. The Georgians, who numbered 2,248,000 in the USSR in 1939, are concentrated largely in the Georgian SSR. On the other hand, only about one-half of the

total number of Armenians in the USSR live in the Armenian SSR. The remainder are scattered over much of the Transcaucasus, chiefly in cities. 1

Locally, other ethnic groups are in a majority on the Soviet side of the border, the largest groups being the Adzhars and the Azerbaydzhan Turks. The Adzhars, who numbered 71,000 in 1939, are located in the Adzhar ASSR adjacent to the northwesternmost sector of the boundary. They are an indigenous mountain people, many of whom have become acquainted only recently with the outside world. The Adzhars differ from the Georgians, with whom they are often closely associated, mainly in their adherence to the Mohammedan religion. The Azerbaydzhan Turks are found in the vicinity of Akhaltsikhe and also along the southernmost section of the boundary. They follow the Shia creed, which is the national religion of Iran, and their language is Turkic. The Nakhichevan ASSR, which was created for the latter group, is an exclave of the Azerbaydzhan SSR completely cut off from the rest of that Republic by the Armenian SSR.

On the Turkish side of the boundary the Osmanli Turks constitute at least 75 percent of the population.² In Coruh <u>il</u> (vilayet,

^{1.} JANIS 41, Chapter X, Map X-1, Ethnic Groups, and Völkerkarte des Kaukasus und Seiner Vorländer, 1:1,000,000, Reichsamt für Landesaufnahme, 1941, CIA Map Library Call No. 37230.

^{2.} Ethnographische Karte der Turkei, 1:2,500,000, Erich Zander Druck und Verlagshaus, 1941, CIA Map Library Call No. 22710.

province) the remainder of the population consists mainly of Adzhars, Georgians, Lazes, and a few Armenians. In 1935 the Georgians and Adzhars of Turkey together totaled about 57,000. Some 15,000 of these lived in Çoruh il, where they formed between 5 and 6 percent of the population. At the same time there were about 57,000 Armenians in Turkey. Approximately 2,000 lived in Çoruh il, most of whom probably were concentrated in the city of Çoruh (Artvin). Probably a few Armenians lived in Kars il also. The Lazes are found chiefly in the Black Sea coastal strip and in the mountain areas as far west as Trabzon il. In all of Turkey they totalled about 63,000 in 1935 and in Çoruh il constituted about 20 percent of the population. Like the Adzhars, the Lazes are an indigenous and relatively isolated mountain people of Mohammedan religion.

The Kurds, numbering about 1,500,000 or 9 percent of the total population, are the largest minority in Turkey and are found in substantial numbers throughout fully one-third of the total area of Turkey, chiefly in the east and southeast. In Kars il the Kurds constitute about 25 percent of the population and areas in which they constitute a 75 percent majority of the population lie not far to the south, the nearest area being Ağrı il. Recognizing the Kurds as a possible source of difficulty, the Turks have been 1. Istatistik Yıllığı (Statistical Annual), Vol. 17, 1949, p. 44.

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reluctant to disclose recent information on their numbers and distribution, especially in areas near the frontiers. According to one source; figures as of 1945 indicate that at that time the Kurds probably constituted about 23 percent of the population of Kars.

Historically, these independent, nomadic Kurds have been a difficult people to integrate and control. Since Turkey became a republic, they have revolted three times, most recently in 1937. The Turkish Government has been working toward the assimilation and Turkification of the Kurds, mainly by resettling them in agricultural villages and by promoting the Turkish language. How successful the program will be is still in doubt, since the customs and nomadic mountain life of the Kurds are deeply rooted.

Another evidence of Turkish anxiety concerning the Kurds is the resettlement of several thousand Balkan Moslem Turks, who emigrated from Bulgaria in 1937, in the area around the city of Iğdır,² apparently to form a stable buffer between the Kurds and the Soviet frontier.

Iraq, Syria, and Iran have about 1.5 million Kurdish peoples
living in areas adjacent to Turkey, making a total of about 3 million
Kurds in this part of the Middle East, thus creating a problem not
only for Turkey but also for this entire Middle East area. Turkish

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^{1.} Ethnographische Karte der Turkei, 1:2,500,000, Erich Zander Druck und Verlagshaus, 1941, CIA Map Library Call No. 22710.

anxiety over the problem of the Kurds as they affect the stability of eastern Turkey is increased by the Kurdish nationalist movement of recent years (see p. 42, Boundary Problems, for a discussion of past and potential threats inherent in the Kurdish population).

IV. BOUNDARY PROBLEMS

There appears to be no disagreement between Turkey and the Soviet Union regarding the location of the present boundary. The Soviet claims to areas of northeastern Turkey, put forward at the end of World War II, require a change in the boundary, but so large a part of Turkey is involved that the problem lies in the category of general Turkish-Soviet relations rather than of boundary disputes as such. For this reason, the Soviet claim is treated only briefly in the present report. Also discussed is the question pending between the two countries regarding the division of Aras River waters for irrigation purposes.

A. Soviet Claims on Turkish Territory.

During conversations held at Potsdam in 1945, Mr. Molotov is said to have stated that

...the Soviet Government had made no demands upon the Turkish Government upon any matter and that the Turkish Government had discussed with the representative of the Soviet Government the question of a treaty or an alliance between the two governments and that in the course of the discussions the representative of the Soviet Government had advised the representative of the Turkish Government that there would have to be a discussion of the Straits and also of the two provinces of Kars and Ardahan in considering such a matter.

The question of a treaty or an alliance between the two governments had arisen on 19 March 1945 when the Soviet-Turkish treaty of friendship, which had been in effect since 1925, was denounced by the USSR and the Soviets refused to sign a new agreement to replace

^{1.} Secretary James F. Byrnes, Memorandum of the Press Conference and Radio News Conference, 8 March 1946, No. 14.

this pact. To date, the alliance has not been renewed, and during the past 6 years the Soviets have continued from time to time to make unofficial demands for Turkish territory in the border area.

Soviet writings are rather vague and inconsistent regarding the extent of the territory claimed. At their broadest, Soviet claims embrace about 11 of the northeastern iler (vilayets) of Turkey and extend south and west to the line indicated on the map CIA 11806. The claims include not only the territories of Kars and Ardahan, which were part of Russia from 1878 until 1921, but also an additional area that historically was part of Greater Armenia. Soviet Georgian and Armenian writers claim that in the past this part of Turkey was occupied by the Georgian and Armenian peoples. In addition, the Armenian writers assert that the territory should be returned to Soviet Armenia to form a "homeland" for foreign Armenians. The Georgian and Armenian Republics are thus used by the USSR as a convenient propaganda weapon in pressing its claims. In a crisis the Soviets may use the territorial claims they have made on behalf of the Armenians and Georgians to gain a revision of the present boundary with Turkey. A discussion of the problems involved in all of the claims presented by the Soviet Government is included in "Soviet Territorial Demands on Turkey."1

Probably the most important potential threat to the eastern frontier of Turkey is the large concentration of Kurds in the eastern and southeastern part of the country and in adjacent areas

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of the Middle East (see the section on Peoples in the Boundary Area, p. 34). Kurdish nationalist movements have arisen in recent years, especially among Syrian and Iraqi leaders, and the Soviet Union has encouraged such movements. In addition, the Soviet Union had been actively agitating for a Kurdish nationalist movement among tribal leaders in Iran and Iraq. All of this activity has tended to make Turkey increasingly wary of Soviet intentions with regard to Turkish territory. Had the Soviet Union been successful in its claims for Kars il alone, the USSR would have bordered directly upon a Turkish' area (Agri \underline{il}) in which the Kurds form a 75-percent majority. This would have placed the Soviet Union in a position favorable for exerting a greater amount of direct influence on the Kurdish nationalist movement throughout the Turkish portion of Kurdistan. Currently, one of the main concerns of the Turks is the possibility that the Soviet Union might gain control of Iran, which not only would give the Soviets control of a part of Kurdistan in northwestern Iran but also would put them in a good position for promoting a direct propaganda or military campaign against the Turkish and Iraqi portions of Kurdistan. The Turkish fear of such "encirclement" was expressed on 16 April 1951 in an article in the Turkish newspaper Cumhurujet entitled "We Must Be Alert." The Turkish Government has indicated that it would never accept any loss of territory through revision of its national boundaries.

B. Serdarabad Dam Question.

In 1927 the Turkish Government and the Soviet Union completed an irrigation agreement providing for the construction of dams on the frontier rivers. In conformity with Article V of this agreement a protocol was completed that provided for the construction of a dam on the Aras River for the Serdarabad Canal. The dam is located northwest of Kiti about a quarter of a mile from a bridge over the Aras.² So that it would benefit both countries, the dam was built with diversion gates on each side of the river.

The Soviet Government undertook the construction and repair of the dam, and Turkey agreed to pay half of the cost. In 1937 the Soviets stated that Turkey's share was 1 million rubles. The Turkish Government thus far has been unable to pay its debt, and the Soviets, who control the dam, have refused to allow any of the water to go to Turkey until the government has paid. There is some apprehension on the part of the Turks that the Soviet Union might create difficulties even after their share has been paid. 3 Speaking before the Turkish Grand National Assembly in January 1950, Minister of Foreign Affairs Sadak declared, however, that the Turkish share of the expenses should be paid. He added:

If the other side creates difficulties in spite of the carrying out of our undertaking and payment of our share we shall not refrain from the usual measures taken in case of any dispute between two neighboring states.4

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[&]quot;Convention Regarding the Use of Frontier Waters," Soviet Treaty Series, Vol. I, 1917-1928, Washington, D. C., 1950, pp. 324-325. 2. Marker No. 32, shown on map CIA 11737, is located at the bridge.

Some type of cooperation from the USSR appears to be necessary if Turkey is to develop any important irrigation works along the section of the Aras River that forms the international boundary. The main tributaries of the Aras in this area are on the Soviet side and provide an undisputed source of water for Soviet irrigation projects. Irrigation water for the Turkish side, on the other hand, must come largely from the Aras River itself, and the Turks must negotiate with the Soviets for any substantial share of the Aras waters. Some Turkish farmers have tried to build small diversion dams on the Turkish side of the river, but changes in the water level have either washed out the dams or left them dry. The Turks believe that the Soviets have deliberately caused the water level to fluctuate. In spite of the Turkish need, it is not probable that negotiations for other joint projects will take place until the Serdarabad problem is settled.

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V. MAP COVERAGE OF THE BOUNDARY AREA

Six maps covering the Turkish-Soviet boundary have been selected for discussion. Three of these series are Russian or Soviet, two are Turkish, and one is the series of boundary demarcation maps prepared jointly by the two countries. Foreign maps of the area were not selected because they were all compiled from Turkish and Russian or Soviet series and add nothing to the information regarding the boundary. In the order of their scales, the selected series are as follows:

- 1. /Turkish-Russian Border, 1:25,000
- 2. /Dvukh-Verstnaya Karta Kavkaza, 1:84,000
- 3. Türkiye Cumhuriyeti, 1:200,000
- 4. /Topographic Map: 1:200,0007
- 5. /General Map of the USSR7, 1:500,000
- 6. <u>Türkiye</u>, 1:500,000

The accompanying map, CIA 11737, is a composite in English of information on the boundary and the border area taken from the six selected maps. The 1:25,000 series was prepared at the time the boundary was being demarcated on the ground and comprises the largest-scale and most detailed map available for the boundary area. The 1:25,000 series was used, together with the protocol, as the basis for a comparative study of the boundary coverage on the five other

selected series. <u>Türkiye</u>, 1:500,000, was used as the base¹ on which the international boundary from the demarcation maps was plotted. Selected information from the remaining four series was added to the base.

A complete citation and a brief discussion of each of the six selected map series specifically in relation to the portrayal of the boundary and features in the adjacent area are given in the following paragraphs.

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This series of 49 sheets covers the Turkish-Soviet border. The maps were made after the terrain along the boundary had been surveyed by the Turkish-Soviet Mixed Boundary Commission of 1925-26, and the trigonometric points established during the survey are shown on the maps. Most of the place names have been romanized. Coordinates and marker numbers are indicated in the Turkish script on some sheets, whereas European equivalents are used on others.

The detailed description of the boundary given in the protocol is accurately followed on these maps. The two agree as to locations,

^{1.} There is a difference of approximately 0°l' in geodetic base between the Turkish 1:500,000 and other sets (the Russian 1:500,000, for example). This difference was not rectified in the preparation of CIA 11737. The data from other sources cited were tied into the Turkish 1:500,000 base topographically, disregarding geodetics.

2. There is some question concerning the authority publishing this series.

spot elevations, and distances. The map sheets show features for a distance of 2 kilometers on each side of the boundary line. Contours are given at 10-meter intervals.

Four hundred and fifty boundary markers and numerous intermediate signs were erected on the ground along the boundary. Double pillars were set in many places, most of them on islands in the Aras River or along its banks. Pillars also were placed on the banks of streams that cross the boundary. Cultivated areas, roads, tracks, wells, ruins, and other cultural features mentioned in the protocol are located on the maps.

Used together with the protocol, these maps give an excellent detailed representation of the present boundary. The usefulness of the series, however, is limited because of the narrow strip mapped. If the sheets are used in the construction of small-scale maps, supplementary information must be obtained from topographic maps of the area.

25X1C

Twelve sheets of this series, based on ground surveys dated

Twelve sheets of this series, based on ground surveys dated 1872-1915, cover the border area. Eleven of the sheets are revised editions that show the present international boundary. Sheet XVIII-17, 1912, which has not been revised, shows an old oblast boundary in the section where the Aras River now forms a part of the international boundary.

Terrain is represented by contours and spot heights. The location of these heights in relation to the surrounding terrain is an aid in identifying the features on less detailed topographic maps.

On sheet XV-15 (revised 1940) the numbers of selected boundary markers are given, and for some heights the marker numbers are used in lieu of names.

These sheets provide the most detailed available portrayal of drainage in the boundary area. The use of the sheets for delineating the international boundary is limited, however, because the cultural features are hard to read and recent place name changes have not been incorporated in the revised editions.

25X1C

25X1C

sheets presumably were based on geodetic surveys probably made between 1920 and 1940 and also on earlier provisional surveys produced by plane-table methods. From the differences in quality among the sheets, it is evident that the surveys varied in detail and reliability. The geodetic information on the demarcation maps evidently was not used in compiling the 1:200,000 sheets. There is a difference in longitude of approximately 1 minute that must be taken into account when locating points common to both series.

Elevations are represented by clearly defined contours at 50meter intervals and by spot elevations. Because of the detailed

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information they give on terrain, these sheets are particularly valuable as a source for locating many features mentioned in the protocol, even though the reliability of the individual sheets varies.

The 1:200,000 series covers in general only the area of Turkey. Coverage is not extended north or east of the border area. On several of the sheets, sections of the boundary and some topographic features appear beyond the neatlines. Most of the features thus shown have been distorted in the attempt to crowd them onto the sheets, and consequently the information is not reliable, especially that given in the northeast corner of sheet B-XV.

The amount of Soviet territory shown on the maps depends on the location of the boundary in relation to sheet lines and therefore varies considerably. On several of the sheets, Soviet areas of considerable extent are included, and many of the Soviet topographic features mentioned in the protocol are located. Sheets B-XIV and B-XV have been extended beyond their neatlines to include not only the boundary but also the important Soviet port of Batumi. On other sheets, few Soviet features are shown.

Each of the six sheets carries a marginal note stating that road and name revisions were made in 1944. Most of the place names mentioned in the protocol appear on these maps, which provide the only available Turkish source for the names of some of the lesser known features. The nomenclature is less satisfactory for mountain

^{1.} By the Treaty of Kars, Turkey was assured free transit of goods through this port.

peaks and ranges. The extent of the terrain covered by each name and the nomenclature applied by the Turkish Mapping Directorate to the various peaks are difficult to ascertain. This observation applies also to other available Turkish series, all of which were based on the 1:200,000 sheets.

The international boundary is shown in detail on these sheets. In general, the portrayal of the boundary is fairly accurate in relation to the topographic features. If the sheets are used for plotting the boundary, however, allowances must be made for inaccuracies in the geodetic data.

(4) Topographic Map; 1:200,0007; responsibility for compilation divided between the military establishment (called at different times by such titles as Military-Topographic Administration of the General Staff of the Red Army, or of the General Staff of the Workers and Peasants Red Army, etc.) and civilian agencies (also variously named, e.g., the All-Union Cartographic Trust, Chief Administration of State Survey and Cartography, Chief Administration of Geodesy and Cartography, etc.); 6 boundary sheets, 1936-41; in Russian; AMS Call No. N 3-30-57049-200 (1 original and 5 photocopies).

The present Turkish-Soviet boundary is shown on seven sheets of this series, 1 six of which (K-38-X-W, X-E, XIII-E, XVI-E, XVII-W, and J-38-II-W) are on file at AMS. The seventh (K-37-XII-E),

^{1.} The various border sheets cover 1° of longitude and 40' of latitude. Each sheet covers 1/36 of the area of an IMW sheet. Within the area covered by an IMW sheet the Russian numbering system runs from 1 to 36 on the various sheets, and the German 1:200,000 series also is numbered in this order. AMS numbers appearing on the sheets run from 1 to 18, and both an east and west sheet are included under each number.

covering the Batumi area, is not available. For this area the border sheet (K-37-XXIV) in the German 1:200,000 series may be used.

Compilation notes on the Russian sheets indicate that survey data used were taken from earlier large-scale Russian sources, including the 1:84,000 and the 1:42,000 series. Revisions, however, were made in the basic data, and supplementary material was added.

Relief is represented by contour lines at 40- and 80-meter intervals, with additional contours at 20-meter intervals for the lowlands. Spot elevations are given in meters. In most instances, the figures for elevations in the border area given on the maps agree closely with those in the protocol.

Use of these maps for locating detailed topographic features mentioned in the protocol and shown on the demarcation maps is limited by the following factors:

- (a) On the five photocopy sheets the lack of color makes it difficult to distinguish between contours and lines representing features such as watercourses. On the one original sheet (J-38-II-W), which is in color, the topographic features are easily distinguished.
- (b) The boundary is so generalized on all sheets that it is difficult to locate specific features along its course.

^{1. &}lt;u>Kaukasus</u> (Caucasus); 1:200,000; Generalstab des Heeres (General Staff of the Germany Army); first edition 1941, new series 1942; CIA Call No. 9626. The boundary sheets of this series were compiled from Soviet maps supplemented from other sources. The German sheets are in color and provide an excellent reference for verifying topographic features that are not clear on the Russian photocopies.

There are three points on sheet K-38-XIII-E where the boundary does not agree with that shown on the demarcation map.

In spite of their limitations, the sheets of this series provide the best source at intermediate scale for the official Soviet interpretation of the boundary. They also are useful for locating many of the detailed topographic features that are mentioned in the protocol as being on the boundary or in Russia and for verifying the names and locations of peaks and ranges in the border area. These sheets provide the only official source for the nomenclature applied to many of the detailed features that are mentioned in the protocol as being in the USSR. 1

(5) General Map of the USSR/; 1:500,000; General'nyy Shtab Krasnoy Armii (General Staff of the Red Army); boundary sheets, 1940-41; in Russian; CIA Call No. 22963, AMS Call No. N 3-30-57049-500.

The border area is covered by three sheets of this series. The principal source used in compiling two of the sheets, K-37-G and J-38-A, was a map in the Turkish 1:800,000 series, published in 1936.² On the third sheet, K-38-V, credit is given not only to the 1:800,000 Turkish map but also to a Soviet map at 1:500,000 published in 1938. Additional materials available up to March 1940 were used in the compilation of all three sheets.

^{1.} It is apparent from recent small-scale maps that the Soviets have changed the spellings of many of the larger topographic and cultural features in this area. Names of many smaller features appearing on the 1:200,000 sheets also may have been changed since these sheets were published.

^{2. &}lt;u>Tűrkiye</u>; 1:800,000; Harta Genel Directőrlűgű (/Turkish/ General Map Directorate); 1936; in romanized Turkish; CIA Call No. 23333. This series was compiled from sheets of the Turkish 1:200,000 map that were completed in 1936.

Topography is represented by contours. Spot elevations are given in meters.

The maps are a valuable source for locating topographic features shown on the demarcation maps and for checking the Russian nomenclature applied to the various features. They may be used as a source for delineating the boundary on smaller-scale maps, since within scale limits the line agrees closely with that shown on the demarcation maps.

(6) <u>Türkiye</u> (Turkey); 1:500,000; Harta Genel Műdűrlűgű (/Turkish/ General Map Directorate); 1946; in Turkish; CIA Call No. 60879. 1

Three sheets of this series, entitled <u>Trabzon</u>, <u>Kars</u>, and <u>Van</u>, cover the Turkish-Soviet boundary. Since the maps were compiled from the Turkish 1:200,000 border sheets (item 3), the geodetic data on the two series disagree in the same way with the data on the demarcation maps (item 1). The three sheets provide the best over-all topographic coverage of the Turkish border area that is available at the scale of 1:500,000. The rugged character of the terrain in the border area is clearly indicated by the combination of hypsometric tints and contours, and the course of the international boundary is clearly indicated by a fine black line overprinted by a narrow purple-stippled band.

^{1.} The same series with the addition of magnetic variation information is cataloged as follows: <u>Türkiye</u> (Turkey); 1:500,000 (Aeronautical); Harta Genel Müdürlügü (/Turkish/ General Map Directorate); 1946; in Turkish; CIA Call No. 28810.

In comparing the boundary as shown on the 1:500,000 sheets with that on the demarcation maps, it was found that the coordinates differ, an indication that the demarcation maps were not used in the compilation of the 1:500,000 sheets. There are also several notable differences in delineation of the boundary, particularly in areas where it follows a river course.

Aside from these differences, the boundary on the 1:500,000 map agrees, in general, with that shown on the demarcation maps. Despite their limitations, the 1:500,000 sheets provide the best available topographic coverage of the border area at the scale.

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